



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 82-4-L64-840-(L40)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 20804.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 01-19-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4-28 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE
[MORE] WHITE REFLECTOR w/OPEN BOTTOM
[LUMCAT] 82-4-L64-840-(L40)-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4018
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	168
Total Luminaire Watts	23.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.34
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.08 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3842	3783	3734
55	3754	3718	1929
65	3523	1919	1882
75	2801	622	580
85	968	484	215

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	1500.456	1500.456	1500.456	1500.456	1500.456
5	1524.373	1497.938	1484.721	1482.204	1482.833
10	1508.009	1482.204	1468.987	1466.469	1466.469
15	1482.833	1456.399	1443.182	1477.169	1500.456
20	1446.329	1419.895	1448.217	1438.147	1461.434
25	1395.978	1374.579	1406.677	1354.438	1355.697
30	1340.592	1324.857	1307.234	1299.682	1298.423
35	1270.101	1300.941	1233.596	1239.890	1233.596
40	1181.357	1239.890	1166.252	1160.588	1152.406
45	1094.502	1090.726	1077.509	1064.292	1063.662
50	983.730	974.289	969.254	940.932	598.546
55	867.294	864.776	859.112	449.382	445.605
60	731.346	742.675	395.254	387.072	387.072
65	599.805	597.287	326.651	315.322	320.357
70	443.088	448.123	251.754	87.485	68.603
75	292.035	177.487	64.827	59.792	60.421
80	150.423	76.785	46.575	39.022	36.504
85	33.987	28.322	16.993	8.811	7.553
90	1.259	11.958	4.406	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	556.15	N.A.	13.80
0-30	1192.21	N.A.	29.70
0-40	1977.66	N.A.	49.20
0-60	3437.42	N.A.	85.50
0-80	3989.51	N.A.	99.30
0-90	4018.27	N.A.	100.00
10-90	3876.31	N.A.	96.50
20-40	1421.51	N.A.	35.40
20-50	2243.69	N.A.	55.80
40-70	1863.32	N.A.	46.40
60-80	552.09	N.A.	13.70
70-80	148.54	N.A.	3.70
80-90	28.76	N.A.	0.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4018.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	141.96
10-20	414.18
20-30	636.06
30-40	785.45
40-50	822.18
50-60	637.58
60-70	403.55
70-80	148.54
80-90	28.76
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	34	28	40	33	28	39	33	28	38	32	28	26

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UGR TABLE - CORRECTED

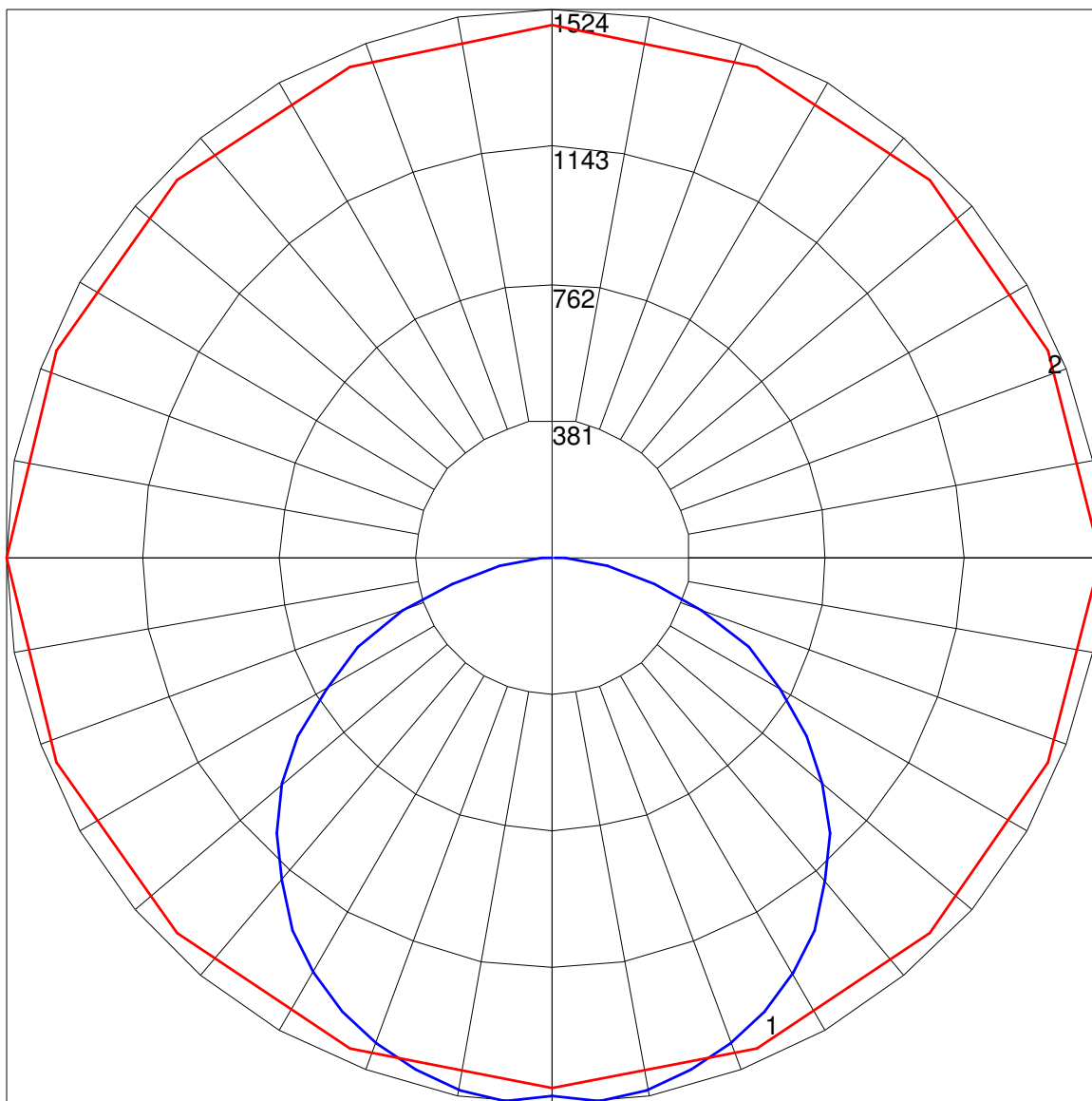
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	17.5	19.0	17.8	19.3	19.7	12.9	14.5	13.3	14.8	15.1
	3H	19.2	20.6	19.6	21.0	21.3	13.5	14.9	13.9	15.3	15.6
	4H	19.7	21.0	20.1	21.3	21.7	13.6	14.9	14.0	15.3	15.7
	6H	20.0	21.2	20.4	21.5	21.9	13.7	14.9	14.1	15.3	15.7
	8H	20.0	21.2	20.5	21.6	22.0	13.7	14.9	14.1	15.2	15.6
	12H	20.0	21.1	20.5	21.5	21.9	13.7	14.8	14.1	15.2	15.6
4H	2H	17.5	18.9	17.9	19.2	19.6	13.6	15.0	14.0	15.3	15.7
	3H	19.6	20.6	20.0	21.0	21.4	14.4	15.4	14.8	15.8	16.2
	4H	20.1	21.0	20.5	21.4	21.9	14.5	15.4	14.9	15.9	16.3
	6H	20.4	21.2	20.8	21.7	22.1	14.6	15.4	15.0	15.9	16.3
	8H	20.5	21.3	20.9	21.7	22.2	14.6	15.4	15.1	15.8	16.3
	12H	20.5	21.2	21.0	21.7	22.2	14.6	15.3	15.1	15.8	16.2
8H	4H	20.0	20.8	20.5	21.2	21.7	14.8	15.6	15.2	16.0	16.5
	6H	20.3	21.0	20.8	21.5	22.0	14.9	15.6	15.4	16.1	16.5
	8H	20.5	21.0	21.0	21.6	22.0	15.0	15.5	15.5	16.1	16.5
	12H	20.5	21.0	21.0	21.5	22.1	15.0	15.5	15.5	16.0	16.5
12H	4H	20.0	20.7	20.5	21.2	21.6	14.8	15.5	15.3	16.0	16.5
	6H	20.3	20.9	20.9	21.4	21.9	15.0	15.5	15.5	16.0	16.5
	8H	20.4	21.0	21.0	21.5	22.0	15.0	15.5	15.5	16.0	16.6

Maximum UGR = 22.2

POLAR GRAPH



Maximum Candela = 1524.373 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)